SECTION 08 71 00
DOOR HARDWARE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Door hardware and related items necessary for complete installation and operation of doors.

1.2 RELATED WORK

A. Application of Hardware: Section 08 14 00, WOOD DOORS, Section 08 11 13, HOLLOW METAL DOORS AND FRAMES

B. Painting: Section 09 91 00, PAINTING.

C. Electrical: Division 26, ELECTRICAL.

1.3 GENERAL

A. All hardware shall comply with UFAS, (Uniform Federal Accessible Standards) unless specified otherwise.

B. Provide rated door hardware assemblies where required by most current version of the International Building Code (IBC).

C. Hardware for Labeled Fire Doors and Exit Doors: Conform to requirements of NFPA 80 for labeled fire doors and to NFPA 101 for exit doors, as well as to other requirements specified. Provide hardware listed by UL, except where heavier materials, large size, or better grades are specified herein under paragraph HARDWARE SETS. In lieu of UL labeling and listing, test reports from a nationally recognized testing agency may be submitted showing that hardware has been tested in accordance with UL test methods and that it conforms to NFPA requirements.

D. Hardware for application on metal and wood doors and frames shall be made to standard templates. Furnish templates to the fabricator of these items in sufficient time so as not to delay the construction.

E. The following items shall be of the same manufacturer, except as otherwise specified:

1. Hinges for hollow metal and wood doors.
2. Surface applied overhead door closers.
3. Exit devices.

1.4 WARRANTY

A. Automatic door operators shall be subject to the terms of FAR Clause 52.246-21, except that the Warranty period shall be two years in lieu of one year for all items except as noted below:

1. Locks, latchsets, and panic hardware: 5 years.
2. Door closers and continuous hinges: 10 years.
3. Electromechanical hardware: 2 years.

1.5 MAINTENANCE MANUALS

A. In accordance with Section 01 00 00, GENERAL REQUIREMENTS Article titled "INSTRUCTIONS", furnish maintenance manuals and instructions on all door hardware. Provide installation instructions with the submittal documentation.

1.6 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. Submit 6 copies of the schedule per Section 01 33 23. Submit 2 final copies of the final approved schedules to VAMC Locksmith as record copies (VISN Locksmith if the VAMC does not have a locksmith).

B. Hardware Schedule: Prepare and submit hardware schedule in the following form:

Hardware Item	Quantity	Size	Reference Publication Type No.	Finish	Mfr. Name and Catalog No.	Key Control Symbols	UL Mark (if fire rated and listed)	ANSI/BHMA Finish Designation

C. Samples and Manufacturers' Literature:

1. Samples: All hardware items (proposed for the project) that have not been previously approved by Builders Hardware Manufacturers Association shall be submitted for approval. Tag and mark all items with manufacturer's name, catalog number and project number.
2. Samples are not required for hardware listed in the specifications by manufacturer's catalog number, if the contractor proposes to use the manufacturer's product specified.

D. Certificate of Compliance and Test Reports: Submit certificates that hardware conforms to the requirements specified herein. Certificates shall be accompanied by copies of reports as referenced. The testing shall have been conducted either in the manufacturer's plant and certified by an independent testing laboratory or conducted in an independent laboratory, within four years of submittal of reports for approval.

E. Shop Drawings: Details of electrified access control hardware indicating the following:

1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:

a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
b. Complete (risers, point-to-point) access control system block wiring diagrams.

2. Electrical Coordination: Coordinate with related Division 26 Electrical Sections the voltages and wiring details required at electrically controlled and operated hardware openings.

1.7 DELIVERY AND MARKING

A. Deliver items of hardware to job site in their original containers, complete with necessary appurtenances including screws, keys, and instructions. Tag one of each different item of hardware and deliver to COTR for reference purposes. Tag shall identify items by Project Specification number and manufacturer's catalog number. These items shall remain on file in COTR's office until all other similar items have been installed in project, at which time the COTR will deliver items on file to Contractor for installation in predetermined locations on the project.

1.8 PREINSTALLATION MEETING

A. Convene a preinstallation meeting not less than 30 days before start of installation of door hardware. Require attendance of parties directly affecting work of this section, including Contractor and Installer, Architect, Project Engineer and VA Locksmith, Hardware Consultant, and Hardware Manufacturer's Representative. Review the following:
1. Inspection of door hardware.
2. Job and surface readiness.
3. Coordination with other work.
4. Protection of hardware surfaces.
5. Substrate surface protection.
6. Installation.
7. Adjusting.
8. Repair.
9. Field quality control.
10. Cleaning.

1.9 INSTRUCTIONS

A. Hardware Set Symbols on Drawings: Except for protective plates, door stops, mutes, thresholds and the like specified herein, hardware requirements for each door are indicated on drawings by symbols. Symbols for hardware sets consist of letters (e.g., "HW") followed by a number. Each number designates a set of hardware items applicable to a door type.

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B. Manufacturers' Catalog Number References: Where manufacturers' products are specified herein, products of other manufacturers which are considered equivalent to those specified may be used. Manufacturers whose products are specified are identified by abbreviations as follows:

IVE	Ives
SCH	Schlage
BES	Best Access Systems
VON	Von Duprin
Don-Jo	Don-Jo Manufacturing
GLY	Glynn Johnson
LCN	LCN
NGP	National Guard Products

C. Keying: All cylindrical locks shall be keyed into existing Best Access Systems Great Grand Master Key System. Provide removable BEST cores that are removable only with a special key without disassembly of knob or lockset**.** Cores shall be 7 pin BEST Interchangeable Core System. No substitutions will be allowed. Keying information will be furnished at a later date by the COTR.

1.10 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. In text, hardware items are referred to by series, types, etc., listed in such specifications and standards, except as otherwise specified.

B. American Society for Testing and Materials (ASTM):
F883-04 ..... Padlocks
E2180-07.....Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) In Polymeric or Hydrophobic Materials

C. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):
A156.1-06 ..... Butts and Hinges
A156.2-03 ..... Bored and Pre-assembled Locks and Latches
A156.3-08 ..... Exit Devices, Coordinators, and Auto Flush Bolts
A156.4-08 ..... Door Controls (Closers)
A156.5-01 ..... Auxiliary Locks and Associated Products
A156.6-05 ..... Architectural Door Trim
A156.8-05 ..... Door Controls-Overhead Stops and Holders

A156.15-06 ..... Release Devices-Closer Holder, Electromagnetic and Electromechanical
A156.16-08 ..... Auxiliary Hardware
A156.18-06 ..... Materials and Finishes
A156.21-09 ..... Thresholds
A156.22-05 ..... Door Gasketing and Edge Seal Systems
A156.28-07 .....Master Keying Systems
A250.8-03 ..... Standard Steel Doors and Frames

D. National Fire Protection Association (NFPA):
80-10 ..... Fire Doors and Fire Windows
101-09 ..... Life Safety Code

E. Underwriters Laboratories, Inc. (UL):
Building Materials Directory (2008)

PART 2 - PRODUCTS

2.1 BUTT HINGES

A. ANSI A156.1. Provide only three-knuckle hinges, except five-knuckle where the required hinge type is not available in a three-knuckle version (e.g., some types of swing-clear hinges). The following types of butt hinges shall be used for the types of doors listed, except where otherwise specified:
   1. Exterior Doors: Type A2112/A5112 for doors 900 mm (3 feet) wide or less and Type A2111/A5111 for doors over 900 mm (3 feet) wide. Hinges for exterior outswing doors shall have non-removable pins. Hinges for exterior fire-rated doors shall be of stainless steel material.
   2. Interior Doors: Type A8112/A5112 for doors 900 mm (3 feet) wide or less and Type A8111/A5111 for doors over 900 mm (3 feet) wide. Hinges for doors exposed to high humidity areas (shower rooms, toilet rooms, kitchens, janitor rooms, etc. shall be of stainless steel material.

B. Provide quantity and size of hinges per door leaf as follows:
   1. Doors up to 1210 mm (4 feet) high: 2 hinges.
   2. Doors 1210 mm (4 feet) to 2260 mm (7 feet 5 inches) high: 3 hinges minimum.
   3. Doors greater than 2260 mm (7 feet 5 inches) high: 4 hinges.
   4. Doors up to 900 mm (3 feet) wide, standard weight: 114 mm x 114 mm (4-1/2 inches x 4-1/2 inches) hinges.
   5. Doors over 900 mm (3 feet) to 1065 mm (3 feet 6 inches) wide, standard weight: 127 mm x 114 mm (5 inches x 4-1/2 inches).

6. Doors over 1065 mm (3 feet 6 inches) to 1210 mm (4 feet), heavy weight: 127 mm x 114 mm (5 inches x 4-1/2 inches).
7. Provide heavy-weight hinges where specified.
8. At doors weighing 330 kg (150 lbs.) or more, furnish 127 mm (5 inch) high hinges.

C. See Articles "MISCELLANEOUS HARDWARE" and "HARDWARE SETS" for pivots and hinges other than butts specified above and continuous hinges specified below.

2.2 CONTINUOUS HINGE

A. Continuous Geared Hinges: ANSI/BHMA A156.26 certified continuous geared hinge with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Provide concealed flush mount (with or without inset), full surface, or half surface, in standard and heavy duty models, as specified in the Hardware Sets. Concealed continuous hinges to be U.L. listed for use on up to and including 90 minute rated door installations and U.L. listed for windstorm components where applicable. Factory cut hinges for door size and provide with removable service power transfer panel where indicated at electrified openings.

2.3 POWER TRANSFER DEVICES

A. Electrified Quick Connect Transfer Hinges: Provide electrified transfer hinges with standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

B. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

C. Electric Door Hardware Cords: Provide electric transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for

each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.

2.2 DOOR CLOSING DEVICES

A. Closing devices shall be products of one manufacturer for each type specified.

2.3 OVERHEAD CLOSERS

A. Conform to ANSI A156.4, Grade 1.
B. Closers shall conform to the following:
   1. The closer shall have minimum 50 percent adjustable closing force over minimum value for that closer and have adjustable hydraulic back check effective between 60 degrees and 85 degrees of door opening.
   2. Where specified, closer shall have hold-open feature.
   3. Size Requirements: Provide multi-size closers, sizes 1 through 6, except where multi-size closer is not available for the required application.
   4. Material of closer body shall be forged or cast.
   5. Arm and brackets for closers shall be steel, malleable iron or high strength ductile cast iron.
   6. Where closers are exposed to the exterior or are mounted in rooms that experience high humidity, provide closer body and arm assembly of stainless steel material.
   7. Closers shall have full size metal cover; plastic covers will not be accepted.
   8. Closers shall have adjustable hydraulic back-check, separate valves for closing and latching speed, adjustable back-check positioning valve, and adjustable delayed action valve.
   9. Provide closers with any accessories required for the mounting application, including (but not limited to) drop plates, special soffit plates, spacers for heavy-duty parallel arm fifth screws, bull-nose or other regular arm brackets, longer or shorter arm assemblies, and special factory templating. Provide special arms, drop plates, and templating as needed to allow mounting at doors with overhead stops and/or holders.
   10. Closer arms or backcheck valve shall not be used to stop the door from overswing, except in applications where a separate wall, floor, or overhead stop cannot be used.
   11. Provide parallel arm closers with heavy duty rigid arm.
   12. Where closers are to be installed on the push side of the door, provide parallel arm type except where conditions require use of top jamb arm.
   13. Provide all surface closers with the same body attachment screw pattern for ease of replacement and maintenance.
   14. All closers shall have a 1 ½" (38mm) minimum piston diameter.

2.4 DOOR STOPS

A. Conform to ANSI A156.16.
B. Provide door stops wherever an opened door or any item of hardware thereon would strike a wall, column, equipment or other parts of building construction. For concrete, masonry or quarry tile construction, use lead expansion shields for mounting door stops.
C. Where cylindrical locks with turn pieces or pushbuttons occur, equip wall bumpers Type L02251 (rubber pads having concave face) to receive turn piece or button.
D. Provide floor stops (Type L02141 or L02161 in office areas; Type L02121 x 3 screws into floor elsewhere. Wall bumpers, where used, must be installed to impact the trim or the door within the leading half of its width. Floor stops, where used, must be installed within 4-inches of the wall face and impact the door within the leading half of its width.
E. Where drywall partitions occur, use floor stops, Type L02141 or L02161 in office areas, Type L02121 elsewhere.
F. Provide stop Type L02011, as applicable for exterior doors. At outswing doors where stop can be installed in concrete, provide stop mated to concrete anchor set in 76mm (3-inch) core-drilled hole and filled with quick-setting cement.
G. Omit stops where floor mounted door holders are required and where automatic operated doors occur.
H. Provide appropriate roller bumper for each set of doors (except where closet doors occur) where two doors would interfere with each other in swinging.
I. Provide appropriate door mounted stop on doors in individual toilets where floor or wall mounted stops cannot be used.
J. Provide overhead surface applied stop Type C02541, ANSI A156.8 on patient toilet doors in bedrooms where toilet door could come in contact with the bedroom door.
K. Provide door stops on doors where combination closer magnetic holders are specified, except where wall stops cannot be used or where floor stops cannot be installed within 4-inches of the wall.
L. Where the specified wall or floor stop cannot be used, provide concealed overhead stops (surface-mounted where concealed cannot be used).

2.5 OVERHEAD DOOR STOPS AND HOLDERS

A. Conform to ANSI Standard A156.8. Overhead holders shall be of sizes recommended by holder manufacturer for each width of door. Set overhead holders for 110 degree opening, unless limited by building construction or equipment. Provide Grade 1 overhead concealed slide type: stop-only at rated doors and security doors, hold-open type with exposed hold-open on/off control at all other doors requiring overhead door stops.

2.6 LOCKS AND LATCHES

A. Conform to ANSI A156.2. Locks and latches for doors 45 mm (1-3/4 inch) thick or over shall have beveled fronts. Cylindrical locksets shall be removable core type and shall be furnished with construction removable cores and construction master keys. Provide BEST brand cores. Cores shall have seven pins and shall be removable by special key. Construct all cores so that they will be interchangeable into the core housings of all mortise locks, rim locks, cylindrical locks, and any other type lock included in the BEST Great Grand Master Key System. Disassembly of lever or lockset shall not be required to remove core from lockset. All locksets or latches on double doors with fire label shall have latch bolt with 19 mm (3/4 inch) throw, unless shorter throw allowed by the door manufacturer's fire label. Provide temporary keying device or construction core of allow opening and closing during construction and prior to the installation of final cores.

B. In addition to above requirements, locks and latches shall comply with following requirements:
   1. Cylindrical Lock and Latch Sets: levers shall meet ADA (Americans with Disabilities Act) requirements. Cylindrical locksets shall be series 4000 Grade I. All locks and latchsets shall be furnished with 122.55 mm (4-7/8-inch) curved lip strike and wrought box. At outswing pairs with overlapping astragals, provide flat lip strip with 21mm (7/8-inch) lip-to-center dimension. Provide lever design to match design selected by Architect or to match existing lever design.
   2. Auxiliary locks shall be as specified under hardware sets and conform to ANSI A156.5.
   3. Privacy locks in non-mental-health patient rooms shall have an inside thumbturn for privacy and an outside thumbturn for emergency entrance. Single occupancy patient privacy doors shall typically swing out; where such doors cannot swing out, provide center-pivoted doors with rescue hardware (see HW-2B).

2.7 ELECTRIC STRIKES

A. Standard Electric Strikes: Heavy duty, cylindrical and mortise lock electric strikes conforming to ANSI/BHMA A156.31, Grade 1, UL listed for both Burglary Resistance and for use on fire rated door assemblies. Stainless steel construction with dual interlocking plunger design tested to exceed 3000 lbs. of static strength and 350 ft-lbs. of dynamic strength. Strikes tested for a minimum 1 million operating cycles. Provide strikes with 12 or 24 VDC capability and supplied standard as fail-secure unless otherwise specified. Option available for latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike.

B. Surface Mounted Rim Electric Strikes: Surface mounted rim exit device electric strikes conforming to ANSI/BHMA A156.31, Grade 1, and UL Listed for both Burglary Resistance and for use on fire rated door assemblies. Construction includes internally mounted solenoid with two heavy-duty, stainless steel locking mechanisms operating independently to provide

tamper resistance. Strikes tested for a minimum of 500,000 operating cycles. Provide strikes with 12 or 24 VDC capability supplied standard as fail-secure unless otherwise specified. Option available for latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike. Strike requires no cutting to the jamb prior to installation.

C. Provide electric strikes with in-line power controller and surge suppressor by the same manufacturer as the strike with combined products having unlimited lifetime warranty.

2.8 KEYS

A. Stamp all keys with change number and key set symbol. Furnish keys in quantities as follows:

Locks/Keys	**Quantity**
Cylinder locks	2 keys each
Cylinder lock change key blanks	100 each different key way
Master-keyed sets	6 keys each
Grand Master sets	6 keys each
Great Grand Master set	5 keys
Control key	2 keys

B. Psychiatric keys shall be cut so that first two bittings closest to the key shoulder are shallow to provide greater strength at point of greatest torque.

2.9 ARMOR PLATES, KICK PLATES, MOP PLATES AND DOOR EDGING

A. Conform to ANSI Standard A156.6.

B. Provide protective plates as specified below:

1. Kick plates, mop plates and armor plates of metal, Type J100 series.
2. Provide kick plates and mop plates where specified. Kick plates shall be 254 mm (10 inches) or 305 mm (12 inches) high. Mop plates shall be 152 mm (6 inches) high. Both kick and mop plates shall be minimum 1.27 mm (0.050 inches) thick. Provide kick and mop plates beveled on all 4 edges (B4E). On push side of doors where jamb stop extends to floor, make kick plates 38 mm (1-1/2 inches) less than width of door, except pairs of metal doors which shall have plates 25 mm (1 inch) less than width of each door. Extend all other kick and mop plates to within 6 mm (1/4 inch) of each edge of doors. Kick and mop plates shall butt astragals. For jamb stop requirements, see specification sections pertaining to door frames.
3. Kick plates and/or mop plates are not required on following door sides:
   a. Armor plate side of doors;
   b. Exterior side of exterior doors;

c. Closet side of closet doors;
d. Both sides of aluminum entrance doors.

2.10 EXIT DEVICES

A. Conform to ANSI Standard A156.3. Exit devices shall be Grade 1; type and function are specified in hardware sets. Provide flush with finished floor strikes for vertical rod exit devices in interior of building. Trim shall have cast satin stainless steel lever handles of design similar to locksets, unless otherwise specified. Provide key cylinders for keyed operating trim and, where specified, cylinder dogging.
B. At non-rated openings with panic hardware, provide panic hardware with key cylinder dogging feature.
C. Exit devices for fire doors shall comply with Underwriters Laboratories, Inc., requirements for Fire Exit Hardware. Submit proof of compliance.

2.11 ELECTROMECHANICALCONVENTIONAL EXIT DEVICES

A. Electrified Conventional Push Rail Devices (Heavy Duty): Subject to same compliance standards and requirements as mechanical exit devices, electrified devices to be of type and design as specified below.
B. Electrified Conventional Push Rail Devices (Heavy Duty): Subject to same compliance standards and requirements as mechanical exit devices, electrified devices to be of type and design as specified below: Corbin Russwin ED5000, Sargent 80 series, Von Duprin 98 or Yale 7000 series. To include: Electrified Options: As indicated in hardware sets, provide electrified exit device options including: electric latch retraction, electric dogging, outside door trim control, exit alarm, delayed egress, latchbolt monitoring, lock/unlock status monitoring, touchbar monitoring and request-to-exit signaling. Unless otherwise indicated, provide electrified exit devices standard as fail secure.
C. Hurricane and Tornado Resistance Compliance: Electromechanical conventional exit devices and electrified tube steel removable mullions to be U.L. listed for windstorm components where applicable. Provide the appropriate hurricane or tornado resistant products that have been independent third party tested, certified, and labeled to meet state and local windstorm building codes applicable to project.

2.12 FLUSH BOLTS (LEVER EXTENSION)

A. Conform to ANSI A156.16. Flush bolts shall be Type L24081 unless otherwise specified. Furnish proper dustproof strikes conforming to ANSI A156.16, for flush bolts required on lower part of doors.

B. Lever extension manual flush bolts shall only be used at non-fire-rated pairs for rooms only accessed by maintenance personnel.
C. Face plates for cylindrical strikes shall be rectangular and not less than 25 mm by 63 mm (1 inch by 2-1/2 inches).
D. Friction-fit cylindrical dustproof strikes with circular face plate may be used only where metal thresholds occur.
E. Provide extension rods for top bolt where door height exceeds 2184 mm (7 feet 2 inches).

2.13 DOOR PULLS WITH PLATES

A. Conform to ANSI A156.6. Pull Type J401, 152 mm (6 inches) high by 19 mm (3/4 inches) diameter with plate Type J302, 90 mm by 350 mm (3-1/2 inches by 14 inches), unless otherwise specified. Provide pull with projection of 70 mm (2 3/4 inches) and a clearance of 51 mm (2 inches). Cut plates of door pull plate for cylinders, or turn pieces where required.

2.14 PUSH PLATES

A. Conform to ANSI A156.6. Metal, Type J302, 200 mm (8 inches) wide by 350 mm (14 inches) high. Provide metal Type J302 plates 100 mm (4 inches wide by 350 mm (14 inches) high) where push plates are specified for doors with stiles less than 200 mm (8 inches) wide. Cut plates for cylinders, and turn pieces where required.

2.15 THRESHOLDS

A. Conform to ANSI A156.21, mill finish extruded aluminum, except as otherwise specified. In existing construction, thresholds shall be installed in a bed of sealant with ¼-20 stainless steel machine screws and expansion shields. In new construction, embed aluminum anchors coated with epoxy in concrete to secure thresholds. Furnish thresholds for the full width of the openings.
B. For thresholds at elevators entrances see other sections of specifications.
C. At exterior doors and any interior doors exposed to moisture, provide threshold with non-slip abrasive finish.
D. Provide with miter returns where threshold extends more than 12 mm (0.5 inch) from fame face.

2.16 WEATHERSTRIPS (FOR EXTERIOR DOORS)

A. Conform to ANSI A156.22. Air leakage shall not to exceed 0.50 CFM per foot of crack length ($0.000774 m^3/s/m$).

2.17 ELECTRONIC ACCESSORIES

A. Request-to-Exit Motion Sensor: Request-to-Exit Sensors motion detectors specifically designed for detecting exiting through a door from the secure area to a non-secure area. Include built-in timers (up to 60 second adjustable timing), door monitor with sounder alert,

internal vertical pointability coverage, 12VDC or 24VDC power and selectable relay trigger with fail safe/fail secure modes.

B. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.

C. Power Supplies: Provide Nationally Recognized Testing Laboratory Listed 12VDC or 24VDC (field selectable) filtered and regulated power supplies. Include battery backup option with integral battery charging capability in addition to operating the DC load in event of line voltage failure. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment

2.18 MISCELLANEOUS HARDWARE

A. Mutes: Conform to ANSI A156.16. Provide door mutes or door silencers Type L03011 or L03021, depending on frame material, of white or light gray color, on each steel or wood door frame, except at fire-rated frames, lead-lined frames and frames for sound-resistant, lightproof and electromagnetically shielded doors. Furnish 3 mutes for single doors and 2 mutes for each pair of doors, except double-acting doors. Provide 4 mutes or silencers for frames for each Dutch type door. Provide 2 mutes for each edge of sliding door which would contact door frame.

2.19 FINISHES

A. Exposed surfaces of hardware shall have ANSI A156.18, finishes as specified below. Finishes on all hinges, pivots, closers, thresholds, etc., shall be as specified below under "Miscellaneous Finishes." For field painting (final coat) of ferrous hardware, see Section 09 91 00, PAINTING.

B. 626 or 630: All surfaces on exterior and interior of buildings, except where other finishes are specified.

C. Miscellaneous Finishes:
   1. Hinges --exterior doors: 626
   2. Hinges --interior doors: 652.
   3. Door Closers: Factory applied paint finish. Dull or Satin Aluminum color.
   4. Thresholds: Mill finish aluminum.
   5. Other primed steel hardware: 600.

D. Hardware Finishes for Existing Buildings: U.S. Standard finishes shall match finishes of hardware in (similar) existing spaces.

E. Special Finish: Exposed surfaces of hardware for dark bronze anodized aluminum doors shall have oxidized oil rubbed bronze finish (dark bronze) finish on door closers shall closely match doors.

F. Anti-microbial Coating: All hand-operated hardware (levers, pulls, push bars, push plates, paddles, and panic bars) shall be provided with an anti-microbial/anti-fungal coating that has passed ASTM E2180 tests. Coating to consist of ionic silver (Ag+). Silver ions surround bacterial cells, inhibiting growth of bacteria, mold, and mildew by blockading food and respiration supplies.

2.20 BASE METALS

A. Apply specified U.S. Standard finishes on different base metals as following:

Finish	Base Metal
652	Steel
626	Brass or bronze

PART 3 - EXECUTION

3.1 HARDWARE HEIGHTS

A. For existing buildings locate hardware on doors at heights to match existing hardware. The Contractor shall visit the site, verify location of existing hardware and submit locations to VA COTR for approval.

B. Hardware Heights from Finished Floor:

1. Exit devices centerline of strike (where applicable) 1024 mm (40-5/16 inches).
2. Locksets and latch sets centerline of strike 1024 mm (40-5/16 inches).
3. Deadlocks centerline of strike 1219 mm (48 inches).
4. Hospital arm pull 1168 mm (46 inches) to centerline of bottom supporting bracket.
5. Centerline of door pulls to be 1016 mm (40 inches).
6. Push plates and push-pull shall be 1270 mm (50 inches) to top of plate.
7. Push-pull latch to be 1024 mm (40-5/16 inches) to centerline of strike.
8. Locate other hardware at standard commercial heights. Locate push and pull plates to prevent conflict with other hardware.

3.2 INSTALLATION

A. Closer devices, including those with hold-open features, shall be equipped and mounted to provide maximum door opening permitted by building construction or equipment. Closers shall be mounted on side of door inside rooms, inside stairs, and away from corridors except security bedroom, bathroom and anteroom doors which shall have closer installed parallel arm on exterior side of doors. At exterior doors, closers shall be mounted on interior side. Where closers are mounted on doors they shall be mounted with sex nuts and bolts; foot shall be fastened to frame with machine screws.

B. Hinge leaves shall be sufficiently wide to allow doors to swing clear of door frame trim and surrounding conditions.

C. Where new hinges are specified for new doors in existing frames or existing doors in new frames, sizes of new hinges shall match sizes of existing hinges; or, contractor may reuse existing hinges provided hinges are restored to satisfactory operating condition as approved by COTR. Existing hinges shall not be reused on door openings having new doors and new frames. Coordinate preparation for hinge cut-outs and screw-hole locations on doors and frames.

D. Hinges Required Per Door:

Doors 1500 mm (5 ft) or less in height	2 butts
Doors over 1500 mm (5 ft) high and not over 2280 mm (7 ft 6 in) high	3 butts
Doors over 2280 mm (7 feet 6 inches) high	4 butts
Dutch type doors	4 butts
Doors with spring hinges 1370 mm (4 feet 6 inches) high or less	2 butts
Doors with spring hinges over 1370 mm (4 feet 6 inches)	3 butts

E. Fastenings: Suitable size and type and shall harmonize with hardware as to material and finish. Provide machine screws and lead expansion shields to secure hardware to concrete, ceramic or quarry floor tile, or solid masonry. Fiber or rawl plugs and adhesives are not permitted. All fastenings exposed to weather shall be of nonferrous metal.

F. After locks have been installed; show in presence of COTR that keys operate their respective locks in accordance with keying requirements. (All keys, Master Key level and above shall be sent Registered Mail to the Medical Center Director along with the bitting list. Also a copy of the invoice shall be sent to the COTR for his records.) Installation of locks which do not meet specified keying requirements shall be considered sufficient justification for rejection and replacement of all locks installed on project.

3.3 FINAL INSPECTION

A. Installer to provide letter to VA Resident/Project Engineer that upon completion, installer has visited the Project and has accomplished the following:
   1. Re-adjust hardware.
   2. Evaluate maintenance procedures and recommend changes or additions, and instruct VA personnel.
   3. Identify items that have deteriorated or failed.
   4. Submit written report identifying problems.

3.4 DEMONSTRATION

A. Demonstrate efficacy of mechanical hardware and electrical, and electronic hardware systems, including adjustment and maintenance procedures, to satisfaction of Resident/Project Engineer and VA Locksmith.

3.5 HARDWARE SETS

A. Except for the BEST cores, hardware brand names are for reference only and substitutions meeting the specification will be considered.

Hardware Schedule

Set: 1

Doors: 026-016, 026-121, 027-106, 030-009, 030-020, 031-001, 031-003, 210-008, 211-003, 211-009, 211-014, 247-104, 261-102, 261-103

Description: Exterior existing aluminum pair of doors vertical rod exit devices with NL/DT trim

1	Electrified base plate for exit device	
	Electrify exit device electric latch retraction or replace with electric latch retraction exit device	
1	Door loop	TSB-C
1	Card reader	By electrical
1	Motion sensor	By electrical
1	24vdc power supply	By electrical
2	Door position switch	DPS-M-BK

Notes: Electrify active leaf exit device with latch retraction. If existing exit device can't be modified to have electric latch retraction, then replace the exit device, concealed vertical rod device, rim device or mortise exit device.

Set: 1A

Doors: 028-103

Description: Exterior aluminum pair of doors concealed vertical rod exit devices with NL/DT trim, new doors, one exit device electrified for card reader

2	Continuous hinge	MCK-12HD	CL	
1	Exit device (CVR, NL electric)	ED4800 O1459 M94 CT7SD	630	
1	Exit device (CVR, DT)	ED4800 T1450	630	
1	Permanent core	Reuse existing cylinder core		
1	Construction core	E09241 - A600 7-Pin	626	
2	Concealed overhead stop	C01541 #6 low profile	630	RF
2	Closer (TJ)	C02041 PT4C, D, H	689	NO
		with 2" frame face adaptor plate - J7500 (includes 7786 plate)		
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Weather strip	By aluminum door supplier		
2	Door sweep	R3A535		PE

1	Door loop	TSB-C		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
2	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK

Set: 1B

Doors: 031-014

Description: Exterior pair of hollow metal doors from stair, new doors, with concealed vertical rod exit devices one electrified for card reader

6	Hinge (hvy wt)	T4A3386 NRP	US26D	MK
1	Exit device (CVR, NL electric)	ED5860 TH959 M94 CT7SD	630	RU
1	Exit device (CVR, DT)	ED5860 TH950	630	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	BE
2	Closer (PA w/stop)	CPS7500	689	NO
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Head weather strip	2891APK		PE
2	Jamb weather strip	45041CNB TEK		PE
2	Astragal (meeting sitle)	29324CSB 3/8" brush		PE
2	Door sweep	R3A535		PE
1	Electric Power Transfer	EL-CEPT		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
2	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK
1	Quick connect cable	QC-C1500P (frame side)		MK

Set: 2

Doors: 019-104, 024-113, 247-101, 247-102, 247-105, 261-109
Description: Pair of doors, door position switch only

2	Door position switch	DPS-M-BK		SU

Set: 3
Doors: 019-101, 019-102, 019-103, 024-009, 026-008, 026-010, 026-014, 027-013, 031-013, 210-002
Description: Exterior existing doors with lockset, replace with electric lockset and door loop for card reader access.

1	Electrified mortise lockset	ML20905 NSM 24AD CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Door loop	TSB-C		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU

Notes: Door will need modified to have a raceway to connect the electrified lockset to the door loop.

Set: 3A
Doors: 028-101
Description: New exterior hollow metal door with lockset, replace with electric lockset and door loop for card reader access.

1	Electric hinge (hvy wt)	T4A3386-QC12	US26D	MK
5	Hinge (hvy wt)	T4A3386 NRP	US26D	MK
1	Top flush bolt	1805 self latch top only	US32D	RO
1	Flush bolt	555	US26D	RO
1	Electrified mortise lockset	ML20905 NSM 24AD CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	BE
1	Surface overhead holder/stop	9 series holder	630	RF
1	Closer (PA w/stop)	CPS7500	689	NO
2	Kickplate	K4125 8" high CSK	Clear	RO
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Head weather strip	2891APK		PE
2	Jamb weather strip	45041CNB TEK		PE

1	Astragal (overlapping)	352CR	PE
2	Door sweep	R3A535	PE
1	Card reader	By electrical	
1	Motion sensor	By electrical	
1	24vdc power supply	By electrical	
2	Door position switch	DPS-M-BK	SU
1	Quick connect cable	QC-C***P LAR (door side)	MK

Notes: Mount astragal on door exterior side. Surface overhead holder/stop for inactive door leaf and the closer is for the active door leaf. Verify hinge size for existing frame.

Set: 4

Doors: 001-008, 001-009, 001-102, 001-103, 001-104, 001-105, 001-106, 008-103, 018-106, 024-001, 024-008, 026-001, 026-009, 026-013, 026-015, 026-019, 026-020, 026-105, 026-111, 026-129, 026-130, 027-001, 027-004, 027-005, 027-015, 030-001, 030-003, 030-006, 030-010, 030-015, 030-017, 030-018, 030-104, 030-108, 030-111, 031-006, 031-007, 031-010, 031-012, 031-016, 031-025, 031-SB05, 210-006, 210-018, 211-001, 211-004, 211-005, 211-006, 211-008, 211-016, 211-018, 211-019, 211-021, 212-006, 261-101, 261-105, 261-108, 261-110, C-001, C-002, C-003, C-004, C-006, C-007, C-008, C-009, C-010, C-011, C-012

Description: Existing door with existing exit device, replacing exit device baseplate with electric latch retraction exit device and door loop.

1	Electrified base plate for exit device		
	Electrify exit device electric latch retraction or replace with electric latch retraction exit device		
1	Door loop	TSB-C	SU
1	Card reader	By electrical	
1	Motion sensor	By electrical	
1	24vdc power supply	By electrical	
1	Door position switch	DPS-M-BK	SU

Notes: Electrify active leaf exit device with latch retraction. If existing exit device can't be modified to have electric latch retraction, then replace the exit device ,for rim device or for mortise exit device.

Set: 4A

Doors: 028-011

Description: New aluminum door with electric exit device, for card reader access.

1	Continuous hinge	MCK-12HD	CL	MK
1	Exit device (rim, NL electric)	ED4200 O1459 M94 CT7SD	630	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	BE
1	Concealed overhead stop	C01541 #6 low profile	630	RF
1	Closer (TJ)	C02041 PT4C, D, H	689	NO
		with 2" frame face adaptor plate - J7500 (includes 7786 plate)		
1	Rain drip cap	R3Y976		PE

1	Threshold	J32190		PE
1	Weather strip	By aluminum door supplier		
1	Door sweep	R3A535		PE
1	Door loop	TSB-C		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK

Set: 4B
Doors: 018-003, 018-104, 018-105
Description: New aluminum door with electric exit device, for card reader access.

1	Continuous hinge	MCK-12HD PT	CL	MK
1	Exit device (rim, NL electric)	ED4200 O1459 M94 CT7SD	630	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	BE
1	Concealed overhead stop	C01541 #6 low profile	630	RF
1	Closer (TJ)	C02041 PT4C, D, H	689	NO
		with 2" frame face adaptor plate - J7500 (includes 7786 plate)		
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Weather strip	By aluminum door supplier		
1	Door sweep	R3A535		PE
1	Electric Power Transfer	EL-CEPT		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK
1	Quick connect cable	QC-C1500P (frame side)		MK

Set: 4C
Doors: 028-001, 210-001, 210-015
Description: New hollow metal door with electric exit device, for card reader access.

1	Continuous hinge	MCK-12HD	CL	MK

1	Exit device (rim, NL electric)	ED5200 TH957 M94 CT7SD	630	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	BE
1	Closer (PA w/stop)	CPS7500	689	NO
1	Kickplate	K4125 8" high CSK	Clear	RO
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Head weather strip	2891APK		PE
2	Jamb weather strip	45041CNB TEK		PE
1	Door sweep	R3A535		PE
1	Door loop	TSB-C		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK

Set: 4D

Doors: 008-001, 008-002, 008-101, 008-104, 030-004, 210-003, 211-007, 212-004, 212-103, 212-105
Description: New hollow metal door with electric exit device, for card reader access.

1	Continuous hinge	MCK-12HD PT	CL	MK
1	Exit device (rim, NL electric)	ED5200 TH957 M94 CT7SD	630	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	BE
1	Closer (PA w/stop)	CPS7500	689	NO
1	Kickplate	K4125 8" high CSK	Clear	RO
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Head weather strip	2891APK		PE
2	Jamb weather strip	45041CNB TEK		PE

1	Door sweep	R3A535		PE
1	Electric Power Transfer	EL-CEPT		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK
1	Quick connect cable	QC-C1500P (frame side)		MK

Set: 4E
Doors: 028-104
Description: New aluminum door with electric exit device, for card reader access.

1	Continuous hinge	MCK-12HD	CL	MK
1	Exit device (rim, NL electric)	ED4200 O1459 M94 CT7SD	630	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	BE
1	Concealed overhead stop	C01541 #6 low profile	630	RF
1	Automatic operator	6960	689	NO
2	Wall actuators	661	US32D	NO
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Weather strip	By aluminum door supplier		
1	Door sweep	R3A535		PE
1	Door loop	TSB-C		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK

Note: Card reader will unlock exit device (provide two sets of unlock contacts) and enable the wall actuator while the exit device is unlocked. Inside wall actuator always enabled, retracts exit device latch bolt and opens door.

Set: 5
Doors: 001-001, 024-004, 024-022, 024-109, 024-120, 027-102, 027-103, 027-108, 027-109, 028-009, 028-010, 028-013, 028-105, 028-106, 030-011, 210-005, 210-007, 210-012, 210-013, 210-019, 211-013, 211-015, 211-017, 211-023, 211-A01, 211-A02, 211-A03, 211-A04, 212-001, 212-011
Description: Existing single door, door position switch only

1	Door position switch	DPS-M-BK		SU

Set: 5A
Doors: 028-005
Description: New hollow metal single door, door position switch only

1	Continuous hinge	MCK-12HD	CL	MK
1	Exit device (rim, NL)	ED5200 TH957 CT7SD	630	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	BE
1	Automatic operator	6960	689	NO
2	Wall actuators	661	US32D	NO
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Head weather strip	2891APK		PE
2	Jamb weather strip	45041CNB TEK		PE
1	Door sweep	R3A535		PE
1	Door position switch	DPS-M-BK		SU

Note: When exit device is dogged down, automatic operator can be turned on. To secure the opening, turn off the automatic operator and un-dog the exit device.

Set: 6
Doors: 008-003, 024-011, 024-016, 026-004, 026-021, 028-012, 030-016, 031-SB01, 210-014, 218-101
Description: Exterior single door with existing lockset, replacing with electric lockset and door loop for card reader access

1	Electrified mortise lockset	ML20905 NSM 24AD CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Door loop	TSB-C		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK

Notes: Reuse existing mortise cylinder. Modify door for electric raceway to mortise lock.

Set: 6A
Doors: 008-105, 212-003
Description: New exterior single door with electric lockset for card reader access

1	Continuous hinge	MCK-12HD PT	CL	MK
1	Electrified mortise lockset	ML20905 NSM 24AD CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Closer (PA w/stop)	CPS7500	689	NO
1	Kickplate	K4125 8" high CSK	Clear	RO
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Head weather strip	2891APK		PE
2	Jamb weather strip	45041CNB TEK		PE
1	Door sweep	R3A535		PE
1	Electric Power Transfer	EL-CEPT		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK
1	Quick connect cable	QC-C1500P (frame side)		MK

Set: 7
Doors: 212-106
Description: Existing exterior door, adding electric strike for card reader access.

1	Electric strike	1006-12/24 (for lockset)	630	HS
1	Electric strike faceplate	KM	630	HS
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU

Set: 7A
Doors: 212-101, 212-106
Description: New exterior hollow metal door with electric strike for card reader access.

3	Hinge (hvy wt)	T4A3386 NRP	US26D	MK
1	Mortise lock (storeroom)	ML2057 NSA CT7SD	626	
1	Electric strike	1006-12/24 (for lockset)	630	HS

1	Electric strike faceplate	KM	630	HS
1	Permanent core	Reuse existing cylinder core		BE
1	Closer (Reg arm)	7500	689	NO
1	Floor stop	440	US26D	RO
1	Threshold	J32190		PE
1	Weather strip	45041CNB		PE
1	Door sweep	R3A535		PE
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C1500P (frame side)		MK

Set: 8
Doors: C-005
Description: Automatic slider doors

1	All hardware	By automatic operator supplier		00

Set: 9
Doors: 210-A02, 210-A03, 210-A04
Description: Roof hatch, door position switch only

1	Door position switch	DPS-M-BK		

Set: 10
Doors: 211-102, 211-114, 211-202, 211-215
Description: Interior two pair of doors, replacing lockset with electric lockset and adding door loop

2	Electrified mortise lockset	ML20905 NSM 24AD CT7SD	626	RU
2	Permanent core	Reuse existing cylinder core		BE
2	Door loop	TSB-C		SU
1	Card reader	By electrical		
2	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
4	Door position switch	DPS-M-BK		SU
2	Quick connect cable	QC-C***P LAR (door side)		MK

Notes: Reuse existing mortise cylinders. Modify door for electric raceway to mortise lock.

Set: 11
Doors: 001-004, 001-006, 001-101, 001-107, 001-108, 001-201, 001-203, 024-115, 027-008, 030-007, 030-008, 031-024, 035-005, 036-106, 210-010, 212-005, 212-007

Description: Interior pair of doors, replacing lockset with electric lockset and adding door loop

1	Electrified mortise lockset	ML20905 NSM 24AD CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Door loop	TSB-C		SU
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK

Notes: Modify door for electric raceway to mortise lock.

Set: 12

Doors: 212-009

Description: Double egress door, securing one leaf with magnetic lock or delayed egress magnetic lock.

1	Mortise cylinder housing	K660 1-1/4"	626	YA
1	Permanent core	Reuse existing cylinder core		BE
1	Card reader	By electrical		
1	Delayed Egress Lock	IMXDA		SU
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
2	Door position switch	DPS-M-BK		SU

Notes:Fire alarm to signal delayed egress lock during alarm.

Set: 13

Doors: 003-003, 003-105

Description: New wood door with electrified lockset for card reader access

2	Hinge	TA2714	US26D	MK
1	Electric hinge (std wt)	TA2714 QC12	US26D	MK
1	Electrified mortise lockset	ML20905 NSM 24AD CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Closer (Reg arm)	7500	689	NO
1	Kickplate	K4125 8" high CSK	Clear	RO
1	Wall stop	401	US26D	RO
3	Silencer	608		RO
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		

1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK

Notes: Verify hinge size for existing frame.

Set: 14
Doors: 001-002, 001-003, 001-005, 001-A01, 001-A02, 027-003, 031-002, 031-017
Description: Existing door with exit device, adding electric strike for card reader access control

1	Electric strike	9600 (for exit device)	630	HS
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU

Notes: Provide 9500 electric strike (for fire exit devices) for fire rated openings. Provide 9400 electric strike (for exit device with 1/2" high strike). Provide 1006 electric strike for mortise or cylindrical lock (provide correct faceplate).

Set: 15
Doors: 027-111, 027-204, 028-004, 028-007, 028-014, 031-SB02, 212-201, 247-103
Description: Interior single new hollow metal doors, with electrified lockset for card reader access

2	Hinge	TA2714	US26D	MK
1	Electric hinge (std wt)	TA2714 QC12	US26D	MK
1	Electrified mortise lockset	ML20905 NSM 24AD CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Closer (Reg arm)	7500	689	NO
1	Kickplate	K4125 8" high CSK	Clear	RO
1	Wall stop	401	US26D	RO
3	Silencer	608		RO
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK

Notes: Verify hinge size for existing frame.

Set: 15A
Doors: 028-202, 028-203
Description: Interior single new hollow metal doors, with electrified lockset for card reader access

2	Hinge	TA2714	US26D	MK

1	Electric hinge (std wt)	TA2714 QC12	US26D	MK
1	Electrified mortise lockset	ML20905 NSM 24AD CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Closer (Reg arm)	7500	689	NO
1	Kickplate	K4125 8" high CSK	Clear	RO
1	Wall stop	401	US26D	RO
3	Silencer	608		RO
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK
1	Quick connect cable	QC-C1500P (frame side)		MK

Set: 16
Doors: 018-103
Description: Interior single new aluminum doors, with electrified deadlatch for card reader access

1	Continuous hinge	MCK-12HD	CL	MK
1	Deadlatch (electrified)	4300 1-1/2" BS 2 (4901 strike)	628	AD
1	Paddle operator (push)	4591	628	AD
1	Mortise cylinder housing	K660 1-1/4"	626	YA
1	Permanent core	Reuse existing cylinder core		BE
1	Push bar	47 T1HD	US32D	RO
1	Door Pull	YBF167 (45 degree offset 10" CTC)	US32D	RO
1	Concealed overhead stop	C01541 #6 low profile	630	RF
1	Closer (TJ)	C02041 PT4C, D, H	689	NO
		with 2" frame face adaptor plate - J7500 (includes 7786 plate)		
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU
1	Quick connect cable	QC-C***P LAR (door side)		MK

Set: 17

Doors: 007-115, 008-004, 008-102, 008-201, 008-202, 008-203, 009-108, 009-201, 018-001, 018-002, 018-004, 018-005, 018-008, 018-101, 018-102, 021-115, 023-001, 023-101, 024-002, 024-003, 024-005, 024-006, 024-007, 024-010, 024-012, 024-013, 024-014, 024-015, 024-017, 024-018, 024-019, 024-020, 024-021, 024-108, 024-110, 024-111, 024-112, 024-114, 024-208, 024-209, 024-210, 024-211, 024-212, 024-223, 025-104, 026-005, 026-017, 026-018, 026-116, 026-118, 026-212, 027-002, 027-006, 027-007, 027-009, 027-010, 027-011, 027-012, 027-014, 027-016, 027-017, 027-018, 027-101, 027-104, 027-105, 027-107, 027-110, 027-112, 027-113, 027-201, 027-202, 027-203, 027-205, 027-206, 027-A01, 028-002, 028-003, 028-015, 028-102, 028-201, 030-002, 030-005, 030-012, 030-013, 030-014, 030-101, 030-102, 030-103, 030-105, 030-106, 030-107, 030-109, 030-110, 030-201, 030-202, 030-203, 030-204, 030-205, 030-206, 030-207, 030-208, 030-209, 030-210, 030-211, 030-212, 031-004, 031-005, 031-009, 031-011, 031-015, 031-021, 031-022, 031-023, 031-029, 031-101, 031-102, 031-103, 031-104, 031-105, 031-106, 031-107, 031-108, 031-109, 031-110, 031-112, 031-113, 031-114, 031-115, 031-116, 031-117, 031-201, 031-202, 031-203, 031-204, 031-205, 031-206, 031-207, 031-208, 031-209, 031-210, 031-301, 031-302, 031-303, 031-SB03, 031-SB04, 035-009, 035-119, 035-218, 035-302, 035-A01, 210-004, 210-009, 210-011, 210-016, 210-017, 210-101, 210-102, 210-103, 210-104, 210-105, 210-106, 210-107, 210-108, 210-109, 210-110, 210-111, 210-112, 210-113, 210-114, 210-115, 210-116, 210-117, 210-201, 210-202, 210-203, 210-204, 210-205, 210-206, 210-207, 210-208, 210-209, 210-210, 210-211, 210-212, 210-213, 210-214, 210-215, 210-216, 210-217, 210-A01, 211-002, 211-010, 211-011, 211-012, 211-020, 211-022, 211-024, 211-101, 211-103, 211-104, 211-105, 211-106, 211-107, 211-108, 211-109, 211-110, 211-111, 211-112, 211-113, 211-115, 211-116, 211-201, 211-203, 211-204, 211-205, 211-206, 211-207, 211-208, 211-209, 211-210, 211-211, 211-212, 211-213, 211-214, 211-216, 211-217, 212-002, 212-008, 212-102, 212-104, 261-104

Description: Existing single door, adding electric strike for card reader access

1	Electric strike	1006-12/24 (for lockset)	630	HS
1	Electric strike faceplate	KM	630	HS
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU

Notes: Verify faceplate for existing lockset. Provide 9600 electric strike for exit device. Provide 9500 electric strike (for fire exit devices) for fire rated openings. Provide 9400 electric strike (for exit device with 1/2" high strike).

Set: 17A

Doors: 028-006, 028-008

Description: New hollow metal single door, with storeroom lockset and electric strike for card reader access

3	Hinge	TA2714	US26D	MK
1	Mortise lock (storeroom)	ML2057 NSA CT7SD	626	RU
1	Electric strike	1006-12/24 (for lockset)	630	HS
1	Electric strike faceplate	KM	630	HS
1	Permanent core	Reuse existing cylinder core		BE
1	Closer (Reg arm)	7500	689	NO

1	Kickplate	K4125 8" high CSK	Clear	RO
1	Wall stop	401	US26D	RO
3	Silencer	608		RO
1	Card reader	By electrical		
1	Motion sensor	By electrical		
1	24vdc power supply	By electrical		
1	Door position switch	DPS-M-BK		SU

Notes: Verify hinge size for existing frame.

Set: 18
Doors: 028-009
Description: New pair of hollow metal doors, existing frame.

6	Hinge (std wt)	TA2714	US26D	MK
1	Top flush bolt	1805 self latch top only	US32D	RO
1	Flush bolt	555	US26D	RO
1	Mortise lock (storeroom)	ML2057 NSA CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	YA
2	Surface overhead stop	10 series stop with pull side bracket	630	RF
2	Kickplate	K4125 8" high CSK	Clear	RO
2	Silencer	608		RO
1	Astragal (overlapping)	By door supplier		
2	Door position switch	DPS-M-BK		SU

Notes: Mount overhead stop on pull side (storage room side) of the door. Verify hinge size for existing frame.

Set: 19
Doors: 211-023
Description: New hollow metal door, existing frame.

3	Hinge (hvy wt)	T4A3386 NRP	US26D	MK
1	Mortise lock (storeroom)	ML2057 NSA CT7SD	626	RU
1	Permanent core	Reuse existing cylinder core		BE
1	Construction core	E09241 - A600 7-Pin	626	YA

1	Closer (PA w/stop)	CPS7500	689	NO
2	Kickplate	K4125 8" high CSK	Clear	RO
1	Rain drip cap	R3Y976		PE
1	Threshold	J32190		PE
1	Head weather strip	2891APK		PE
2	Jamb weather strip	45041CNB TEK		PE
1	Door sweep	R3A535		PE
1	Door position switch	DPS-M-BK		SU

Notes: Verify hinge size for existing frame.

END OF SECTION